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March 25, 2008

VIA MAIL

Charles L. A. Terreni
Chief Clerk/Administrator
South Carolina Public Service commission
101 Executive Center Drive, Suite 100
Columbia, SC 29219

Re: Petition of the Office of Regulatory Staff to Establish Dockets to Consider
Implementing the Requirements of Section 1251 (Net Metering and Additional
Standards) of the Energy Policy Act of 2005
Docket Number: 2005-385-E

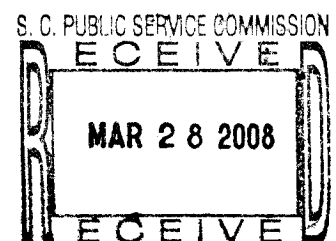
Mr. Terreni:

Enclosed please find an original of the Direct Testimony of Elizabeth M Smith in the
above referenced docket. I am filing this testimony on behalf of myself. I am not acting
in a representative capacity for any party other than myself. This testimony has been
prepared for the hearing relevant to the matter cited above which is scheduled to begin
on Tuesday, April 22, 2008, at 10:30 a.m.

By copy of this letter, I am also serving all other parties of record. Please let me know if
you have any questions.

Yours truly,

Elizabeth M. Smith
Enclosure
Cc: Parties of Record



Testimony of Elizabeth M Smith
On behalf of
Interveners
Docket No. 2005-385-E

Q: Please state your name address and occupation

A: I am a business owner from Charleston. My address is 611 North Shore Dr, Charleston Sc 29412

Q: Please state your relevant experience to this issue

A: I am a homeowner interested in installing solar panels on my home both to reduce my energy costs and help meet South Carolina's clean & renewable energy needs. As a homeowner, I have investigated the mechanics and economics of installing solar panels on my home.. I have talked with SCE&G, the Office of Regulatory Staff, the Energy Office and NC Solar to gain an understanding of the proposed SCE&G net metering tariffs under consideration by the Public Service Commission. My interest in this subject has also lead me to investigate what is happening around the country and the world with solar photovoltaics .

Q: What is the purpose of your testimony?

A: The purpose of my testimony is to convey my concern to the Public Utilities Commission that the net metering tariffs proposed by SCE&G will discourage, rather than encourage, me, and other home owners, from becoming a home renewable energy generator.

Q: Can you describe why you would not be encouraged by the proposed tariffs.

A: Under , SCE&G RIDER TO TIME-OF-USE DEMAND RATES 7 AND 28 (EXPERIMENTAL), I am *required* to move from my current flat "conservation" electric rate to this Rate 7 -- a time-of-use, demand rate. This rate structure is different from rate structures that SC residential customers are used to. It is hard for a consumer to understand and very hard for a residential consumer to predict or control.

Indeed, Mr. Anthony from SCE&G testified to the PSC on February 14th 2008 that the time-of-use demand rate "*took me a long time to understand*". And he works for a power company! Just the complexity of this rate, is a barrier for customers.

Worse, I really believe I am at risk of having monthly power bill go up after I install \$30,000 worth of solar panels on my home. This new rate could raise my power bill before I start trying to reduce it with solar panels.

This rate adds a new monthly "*demand charge*". This "*demand charge*" is based my household's 15 minutes of peak "demand" each month. This 15 minute spike is both difficult to estimate and difficult to lower. This charge is likely to be over \$100/month .In the summer, these 15 minute spikes will probably occur probably late in the day when my solar generation is declining. In the winter, the spikes will occur early in the morning, before solar generation begins. So the "peak demand charge" -- which I didn't have to pay before I moved to solar --may well not be "reduced" by my solar generation.

1 An SCE&G staff member told me that SCE&G has only two customers who have chosen this
2 rate.

3
4 Q: Why do you think this charge will be over \$100/month.

5 A: Here is how my solar vendor and I have calculated this charge.

6
7 Here is a typical late summer afternoon power usage scenario for a family.
8

	watts		watts
AC2 Run non-stop	2500	Lights Various lights on in house	150
Water Heat 15 minutes	4500	TV Kids watching TV	250
Stove Cooking Chicken in oven - on 1/2 time	2500	Total 15 minute watt hour usage	12400
Burner Cooking Rice - 20 minutes on 1/2 time	1500	Converted to kilowatt hour	12.4
House Phantoms Constant Phantom Load - fridge, clocks, etc...	1000	Possible Summer Demand charge @\$10.25 kw hour	\$127

9
10 This power usage spike only has to happen for one 15 minute span in the month and a charge of
11 \$127 has been generated. In the winter this would generate a "peak demand charge" of \$80.
12 I have actually been using a whole house electricity consumption monitor for the last two
13 months in my home. In both months, I have had a peak demand period at 12 kilowatt hours – as
14 predicted by this chart.

15
16 An SCE&G staff member told me that SCE&G has only two customers who have chosen this
17 rate

18
19 Q: SCE&G has also proposed a "flat rate option". Why can't you use that option?

20 A: SCE&G's other option is the use of an existing rate for selling power to the utility at "avoided
21 cost". The "flat rate" option requested by the Public Utilities Commission, Rider to Rate PR-1, is
22 not a really "net metering" option. That rider does not meet the federal definition or common
23 usage of the term net metering. Net metering is generally used to describe a situation where a
24 excess home generation is delivered to the power grid and offsets home power use each month.
25

26 Under PR-1, I would buy power at \$.095 to \$.10/kw and sell my excess at \$.02/kilowatt or less –
27 not much of an "offset". SCE&G staff have told me that no customer who uses this rate has
28 covered the cost of the additional facilities charge levied when selling power under pr-1.
29

30 Q: Why don't you feel that the utility's "avoided cost" is a fair rate for the utility to pay you?

31 A: Any excess power I generate will flow out of my house to "the grid." That power will
32 probably be immediately consumed by my neighbors. Those neighbors will pay SCE&G for the
33 power I generated, as result of my investment in solar voltaics, at SCE&G's retail rate.
34 SCE&G's actual marginal cost for the acquisition of this power is billing adjustments to my
35 monthly bill while their income is "retail" from my generation is retail.
36

37 Q: Don't you think that 'fairness' to other rate payers is an important issue. Those rate payers
38 who buy all their electricity from SCE&G, are providing a revenue stream that SCE&G needs to

1 build peak capacity. As a solar generator you wouldn't be providing your full share toward
2 capacity, but would still want that capacity available if you needed it.

3 A: At the like levels of solar installations in South Carolina in the next several years, the
4 financial impact on the utilities and other rate payers are trivial. North Carolina has about 100
5 customers. Residential Photovoltaic Metering and Interconnection Study, Utility Perspectives
6 and Practices, put out by the industry sponsored Solar Electric Power Association, listed 101,466
7 photovoltaic installations in the entire country in 2006. If you subtract the California and New
8 Jersey who have been at this a long time, other states run between 500 and 2000. I believe
9 SCE&G has over 600,000 customers. With the very low caps in these tariffs, the near term
10 financial risk to the SCE&G if South Carolina implementing attractive net metering standards is
11 extremely low.

12 Additionally while, my brief peak spikes would occur outside of the highest of peak demand
13 hours, my excess generation would put additional power on the grid on hot summer afternoons
14 contributing very constructively to SCE&G's peak electric summer supply.

15
16 Q: In what way could the Public Service Commission adjust the proposed net metering tariffs to
17 create a better incentive for home owners to pursue renewable energy?

18
19 A: I would like to have a choice of rates – one a time-of-use rate and the other the option to net
20 meter with my existing rate.

21
22 The time-of-use rate should be just a time-of-use rate, but not a *demand* time-of-use rates. In the
23 past, demand charges have generally been used in commercial installations, not in residential
24 billing. In commercial installations, it is cost effective for companies to utilize sophisticated
25 demand control devices which turn off electric device when power consumption hit a set "peak".
26 Peak demand charges are unfair for homeowners who can't really control these peaks.

27
28 The straight time-of-use tariff would offer me an option to decide to do laundry, dishes and other
29 high demand items either when my rates are lower or my solar production is at its peak. Other
30 states have found that *mandating* time-of-use slows down the adoption of solar, even if time-of-
31 use can be advantage as consumers learn more about it.

32
33 I would also like to be able to just stay on the rate I currently use and be credited with excess
34 usage on a monthly basis at that rate. This would allow homeowners like me to get into solar
35 without being afraid that we can't anticipate how our electric bills would work.

36
37 Q: Is there anything else you would like to tell the Public Service Commission?

38
39 As South Carolina and the Public Service Commission move forward with renewable energy, I
40 hope the PSC and the legislature can provide a simple, understandable state wide approach to
41 renewable energy and net metering which will really encourage renewable energy in South
42 Carolina. These changes are happening in other states and around the world. SC should look at
43 what is working well elsewhere. The March 2008 Residential Photovoltaic Metering and
44 Interconnection Study, Utility Perspectives and Practices, put out by the industry sponsored Solar
45 Electric Power Association, provides good information on the experience of utilities around the
46 country

1
2 In my reading about net-metering issues, there appear to be power company rate structures and
3 simplified interconnection standards that are working very successfully elsewhere for both the
4 customers and the utilities. Looking at a recent power industry report from utilities that have a
5 significant number of small generators, the biggest real issue power companies face doesn't seem
6 to be revenue loss impacting their ability to deliver "peak power" or the accident potential from
7 interconnected small generators. It is their computerized billing systems can't handle "positive"
8 numbers.
9

10 So far, South Carolina has based its approach to renewable energy on the steps North Carolina
11 has taken. North Carolina's net metering received an "F" grade from the Interstate Renewable
12 Energy Council. North Carolina is already moving on to a different approach to renewables than
13 what they put in place initially. The net metering tariffs in North Carolina have very, very few
14 customers. What development of renewable power there has been in North Carolina has been
15 made possible based on charitable contributions from power customers – an approach unique
16 to North Carolina. (We are planning on following that charitable approach to power generation
17 here in South Carolina with PACE).
18

19 North Carolina has already moved on to a new approach based on Renewable Portfolio standard.
20 There is an open net metering docket. I hope South Carolina can base our approach on successes
21 in other states rather than follow North Carolina's already abandoned initial path. By taking the
22 best of what other states have done, we should be able to develop a system that will be attractive
23 enough to customers to start and to stimulate a local SC alternate energy economy.
24

25 Florida, whose new net metering regulations received an "A" from the Interstate Renewable
26 Energy Council, would be a model worth looking at:
27

28 *"Customer net excess generation (NEG) is carried forward at the utility's retail rate (i.e.,*
29 *as a kilowatt-hour credit) to a customer's next bill for up to 12 months. At the end of a*
30 *12-month billing period, the utility pays the customer for any remaining NEG at the*
31 *utility's avoided-cost rate. Renewable energy credits (RECs) remain with system owner,*
32 *and customers may sell RECs back to the utility. There is no stated aggregate capacity*
33 *limit for net-metered systems. "*
34

35 These regulations are simple and fair and are similar to the kind of simple regulations in place in
36 many states.
37

38 Current electric rates spread costs among customers with uniform rates. Customers far from
39 power plants or with located in challenging locations do not pay higher rates than customers who
40 are more easily physically served with power. South Carolina finds it in the public interest to
41 spread these costs across all rate payers.
42

43 Increasing our experience with and implementations of renewable energy is similarly very much
44 in the public interest – both environmentally and economically.
45

46 Thank you very much for your time.